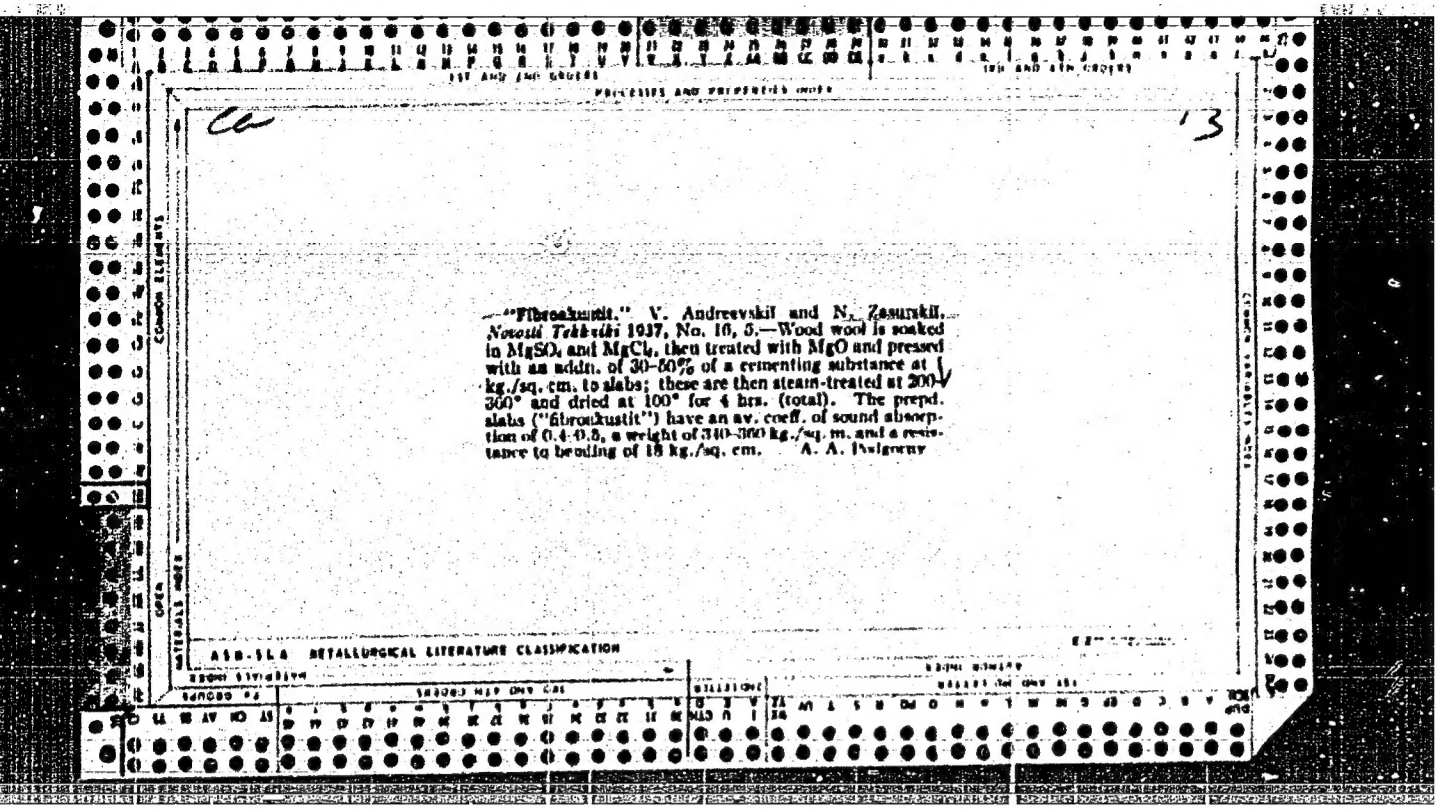
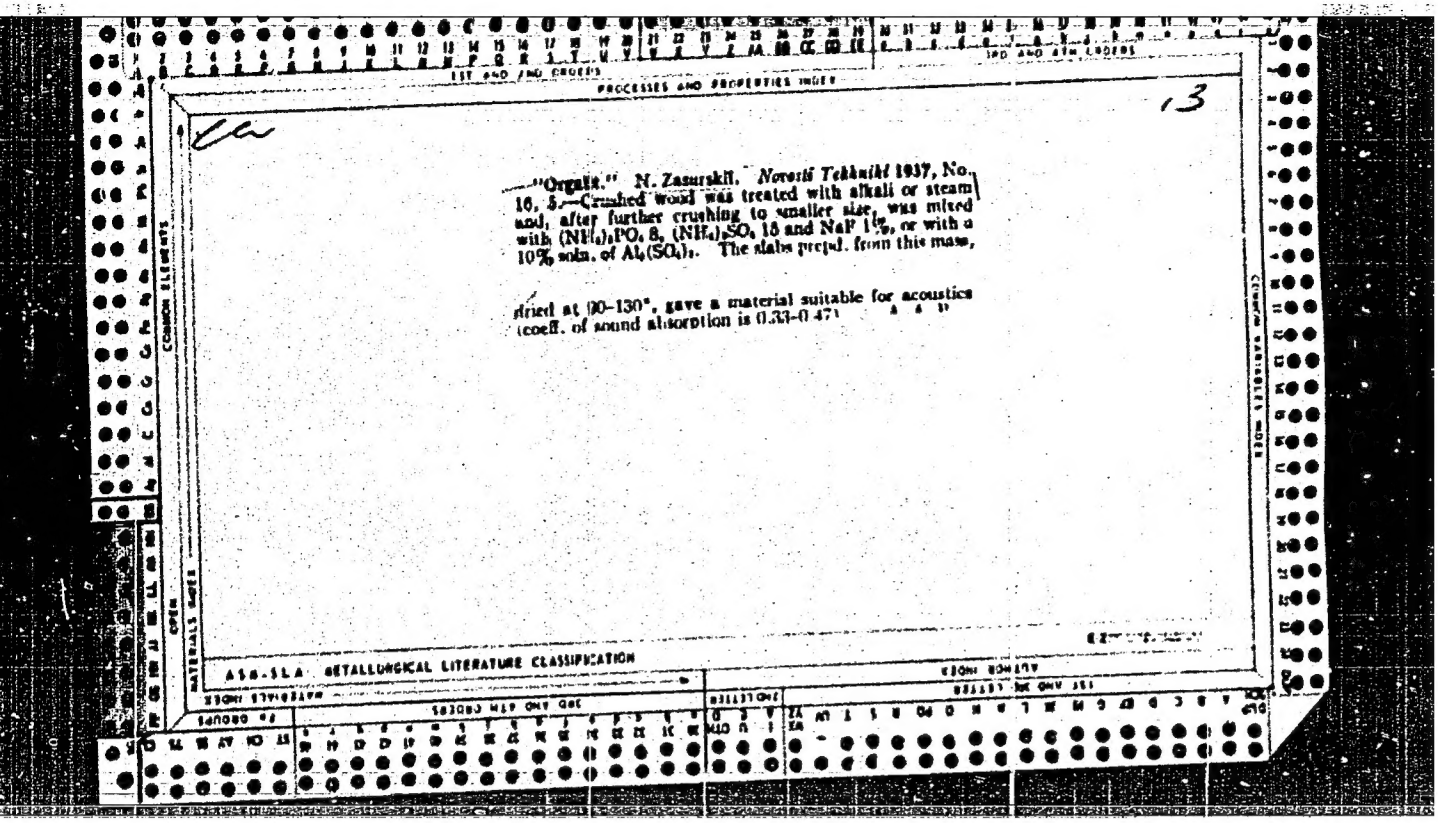


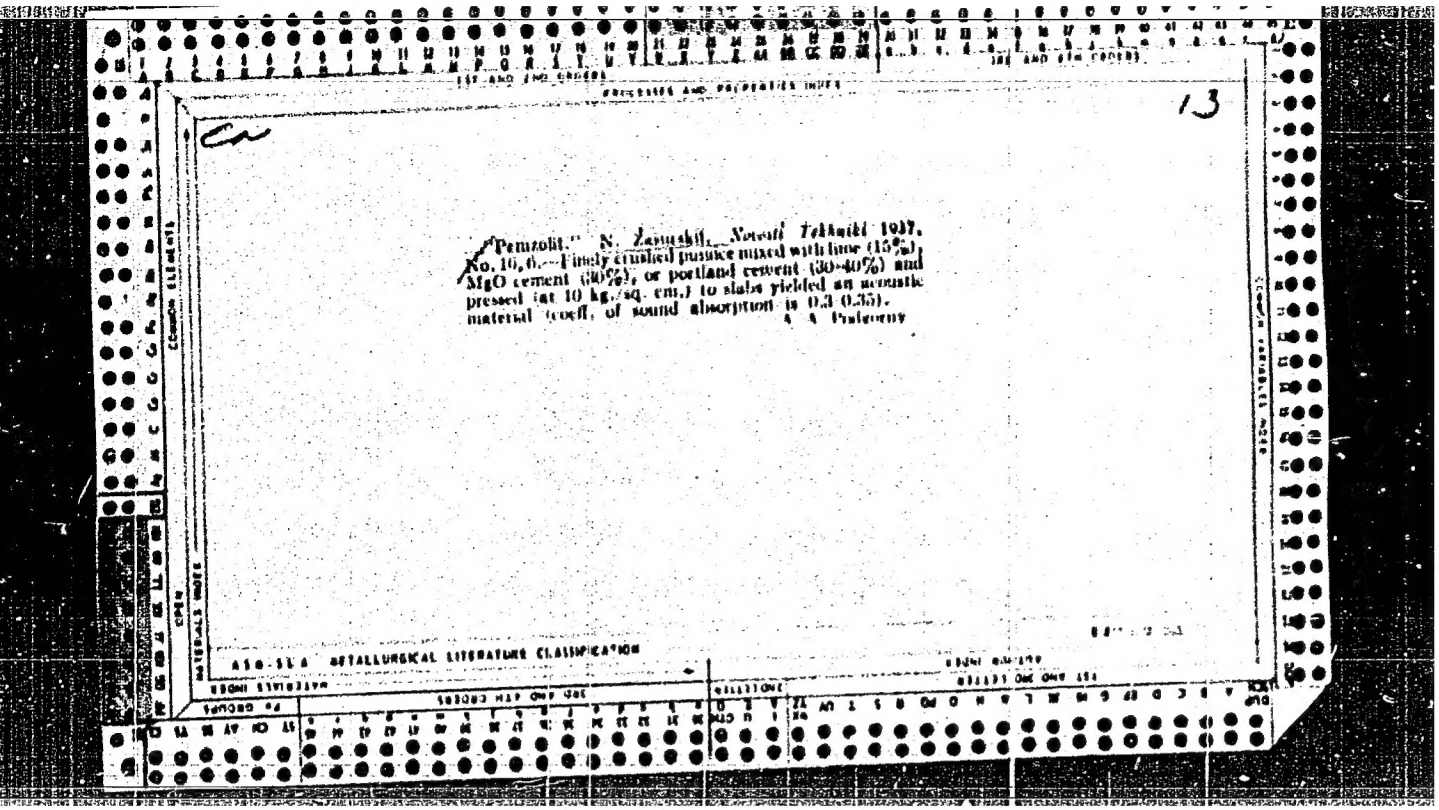
—"Fibrouksutit." V. Andreevskii and N. Zasurskii. *Novosti Tekhniki* 1937, No. 16, 5.—Wood wool is soaked in $MgSO_4$ and $MgCl_2$, then treated with MgO and pressed with an addn. of 30–50% of a cementing substance at kg./sq. cm. to slabs; these are then steam-treated at 200–300° and dried at 100° for 4 hrs. (total). The prepd. slabs ("fibrouksutit") have an av. coeff. of sound absorption of 0.4–0.5, a weight of 340–360 kg./sq. m. and a resistance to bending of 18 kg./sq. cm. A. A. Dulgerov

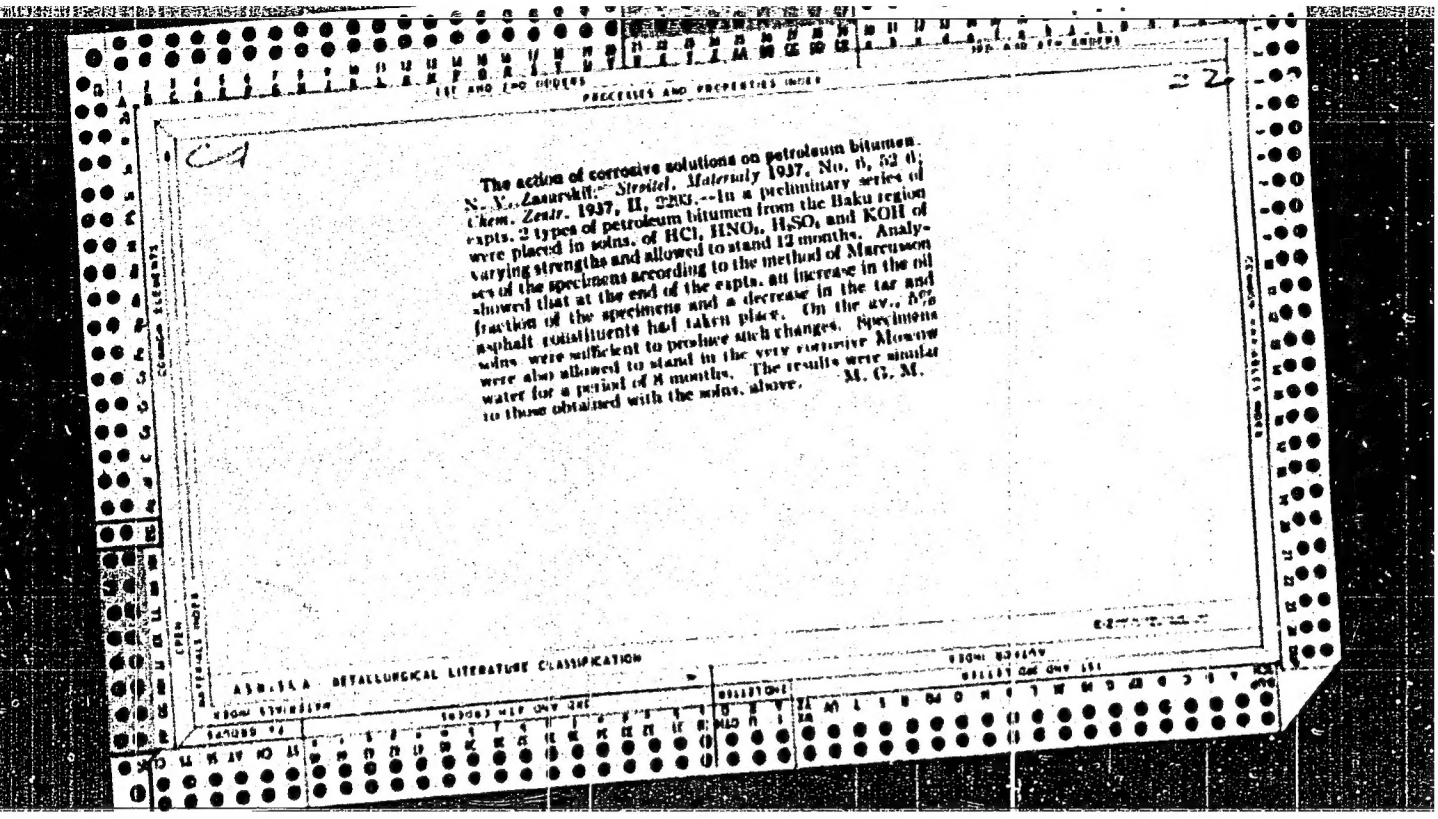


13

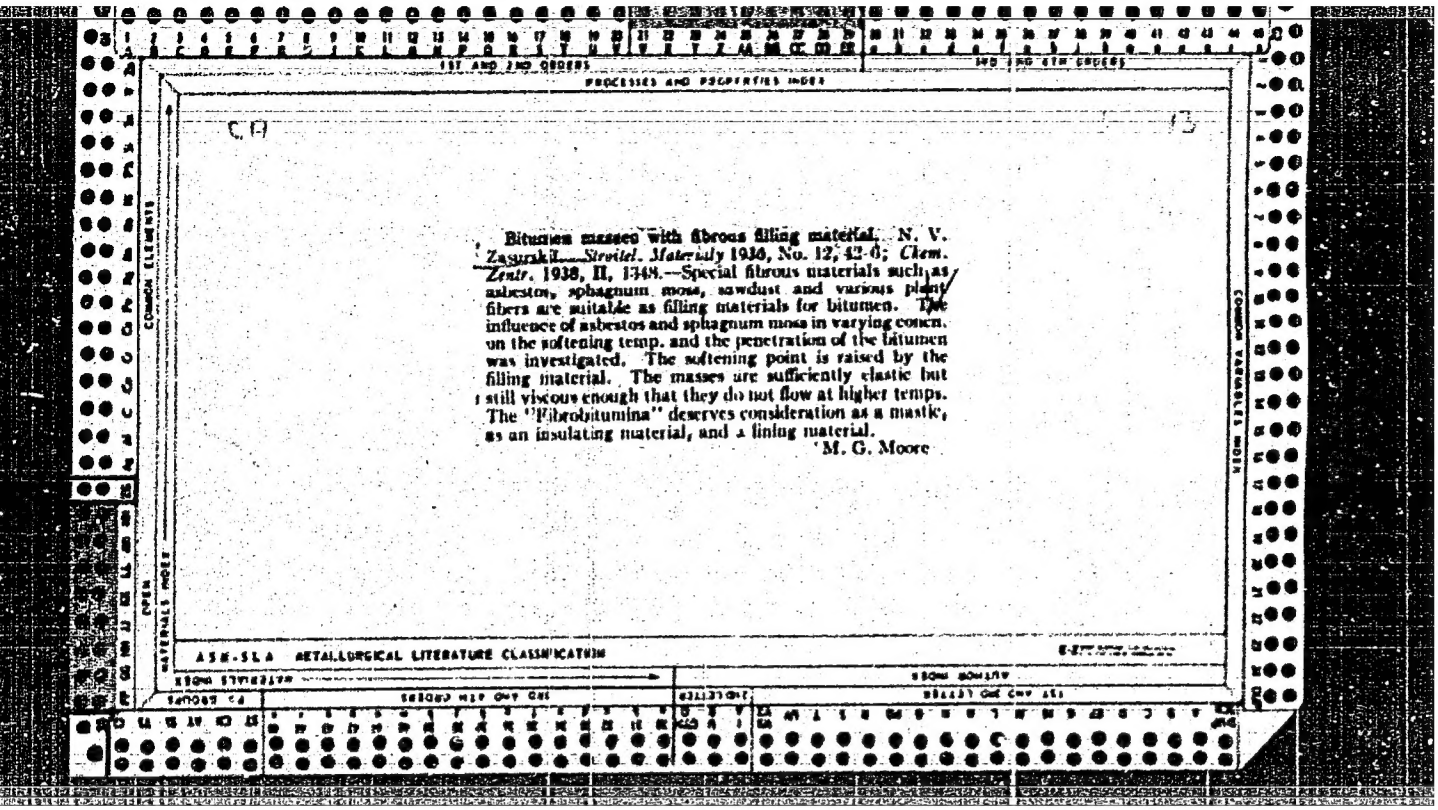
Ca

"Orgalit." N. Zasurskii. *Novosti Tekhniki* 1937, No. 16, 5.—Crushed wood was treated with alkali or steam and, after further crushing to smaller size, was mixed with $(NH_4)_2PO_4$ 8, $(NH_4)_2SO_4$ 15 and NaF 1%, or with a 10% soln. of $Al_2(SO_4)_3$. The slabs prepd. from this mass, dried at 90–130°, gave a material suitable for acoustics (coeff. of sound absorption is 0.33–0.47).





The action of corrosive solutions on petroleum bitumen. N. V. Lazurkin. *Stroitel. Materialy* 1937, No. 6, 52-6; *Chem. Zentr.* 1937, II, 2283.--In a preliminary series of expts. 2 types of petroleum bitumen from the Baku region were placed in solns. of HCl, HNO_3, H_2SO_4 and KOH of varying strengths and allowed to stand 12 months. Analyses of the specimens according to the method of Marcusson showed that at the end of the expts. an increase in the oil fraction of the specimens and a decrease in the tar and asphalt constituents had taken place. On the av., 5% solns. were sufficient to produce such changes. Specimens were also allowed to stand in the very corrosive Moscow water for a period of 8 months. The results were similar to those obtained with the solns. above. M. G. M.



Bitumen masses with fibrous filling material. N. V. Zagurskiĭ. *Stroitel. Materialy* 1936, No. 12, 42-6; *Chem. Zentr.* 1938, II, 1348.—Special fibrous materials such as asbestos, sphagnum moss, sawdust and various plant fibers are suitable as filling materials for bitumen. The influence of asbestos and sphagnum moss in varying concn. on the softening temp. and the penetration of the bitumen was investigated. The softening point is raised by the filling material. The masses are sufficiently elastic but still viscous enough that they do not flow at higher temps. The "Fibrobitumina" deserves consideration as a mastic, as an insulating material, and a lining material.

M. G. Moore

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SMIRNOV, G.A.; ZASYADCHUK, I.M.; KAMALETDINOV, M.A.; KAMALETDINOV, R.A.

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PA 62T45

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Winning

994. ENLARGED TECHNICAL CONFERENCE OF DESIGNERS OF COAL MACHINERY. Zasyadko, A.F. et al. (Ugol (Coal), Aug. 1953, 47, 48). Progress to date and prospects for mine mechanization in 1953-55, including mechanized supports, are discussed. (L).

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(Continued on next card)

BEYLINA, TS.O. --- (continued) Card 2.
RUPPENEYT, K.V., redaktor; TERPIGOREV, A.M., glavnyy redaktor;
BARABANOV, F.A., redaktor; BARANOV, A.I., redaktor; BUCHNEV, V.K.,
redaktor; GRAFOV, L.Ye., redaktor; DOKUKIN, A.V., redaktor; ZADEMID-
KO, A.N., redaktor; ZASYAD'KO, A.F., redaktor; KRASNIKOVSKIY, G.V.
redaktor; LETOV, N.A., redaktor; DISHIN, G.L., redaktor; MAN'KOV-
SKIY, G.I., redaktor; MEL'NIKOV, N.V., redaktor; ONIKA, D.G.,
redaktor; OSTROVSKIY, S.B., redaktor; POKROVSKIY, N.N., redaktor;
POLSTYANOY, G.N., redaktor; SKOCHINSKIY, A.A., redaktor; SONIN,
S.D., redaktor; SPIVAKOVSKIY, A.O., redaktor; STANCHENKO, I.K.,
redaktor; SUDOPLATOV, A.P., redaktor; TOPCHIYEV, A.V., redaktor;
TROYANSKIY, S.V., redaktor; SHEVYAKOV, L.D., redaktor; BYKHOV-
SKAYA, S.N., redaktor izdatel'stva; ZAZUL'SKAYA, V.F., tekhnicho-
skiy redaktor; PROZOROVSKAYA, V.L., tekhnicheskiy redaktor.

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Fedor Georgievich Loginov; obituary. Elek.sta. 29 no.8:1-2 Ag '58. (MIRA 11:11)

(Loginov, Fedor Georgievich, 1900-1958)

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1.Zamestitel' predsedatelya Soveta Ministrov SSSR.
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Academician A.A.Skochinskii; obituary. Bezop.truda v prom. 4 no.11: 18-19 N '60. (MIRA 13:11)
(Skochinskii, Aleksandr Aleksandrovich, 1873-1960)

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(Skochinskii, Aleksandr Aleksandrovich, 1874-1960.)

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ZASYAD'KO, I.N.; TOBILEVICH, N. Yu.

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Sakh.prom.35 no.3:20-28 Mr '61. (MIRA 14:3)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti imeni Mikoyana.
(Boilers—Incrustation)
(Sugar manufacture)

ZASYAD'KO, I.N.

Dependence of the coefficients of scale formation upon the rate of circulation in the evaporation of sugar juices. Trudy KTIPP no.25:124-219 '62. (MIRA 16:5)
(Evaporating appliances) (Sugar manufacture)

TOBILEVICH, N.Yu.; ZASYAD'KO, I.N.; MATEUSH, Ya.O.; VOLOSHKO, D.M.; KALINKINA, Z.M.; SHCHESNO, L.P.

Increasing the corrosion resistence of heat exchanging pipes for the sugar industry. Sakh. prom. 31 no.4:47-53 Ap '57. (MLRA 10:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut sakharnoy promyshlennosti (for Tobilevich, Zasyad'ko and Mateush). 2. VNITI (for Shchesno).

(Pipe) (Corrosion and anticorrosives)

TOBILEVICH, N.Yu.; ZASYAD'KO, I.N.

Investigating the effect of hydrodynamics and heat exchange on scale deposition in the evaporation of sugar juices. Trudy KTIPP no.24:73-81 '61. (MIRA 15:6)
(Sugar manufacture) (Pipes, Deposits in)

ZASYAD'KO, V. (Khar'kov)

Adjustment of the friction clutch system of the "El'fa-10" magnetic tape recorder. Radio no.3:53 Mr '63. (MIRA 16:2)
(Magnetic recorders and recording--Maintenance and repair)

ZASYAD'KO, V.V.; MIKHELEV, A.A.

Effect of the water spraying of panned dough on the kinetics of the baking process. Trudy KTIPP no.22:97-100 '60. (MIRA 14:3)
(Baking) (Dough)

IOBANOV, P.; BREZHNEV, D.; OL'SHANSKIY, M.; LYSENKO, T.; LISAVENKO, M.; SINYAGIN, I.; YAKUSHKIN, I.; PREZENT, I.; VARUNTSYAN, I.; KOLESNIKOV, V.; YEVTUSHENKO, A.; ZASYADIMIKOV, T.; ALIEOV, M.; UTEKHIN, A.; GORSHKOV, I.; BELOKHONOV, I.; VIDENIN, K.; KARPOV, G.; CHERNENKO, S.; BAKHAREV, A.; TIKHONOVA, A.; KUZ'MIN, A.; BUZULIN, G.; TOLMACHEV, I.; LYSYUK, Ye.; KHARITONOVA, Ye.; KUSHNIRENKO, M.; NOVOPAVLOVSKAYA, N.; ZHIRONKIN, I.; KATSURA, O.; KIRYUKHIN, I.; NIKITIN, B.; TSVETAYEVA, Z.; ARKHIPOV, B.; OSTAPENKO, V.; IVANOV, V.; BUTUZOV, V.; LUTKOVA, I.; TSVETAYEVA, Z.; ARKHIPOV, B.; OSTAPENKO, V.; IVANOV, V.; BUTUZOV, V.; LUTKOVA, I.

P.N. IAkovlev; obituary. Agrobiologiia no.6:119 N-D '57.
(MIRA 10:12)

(IAkovlev, Pavel Nikanorovich, 1898-1957)

ZASYADNIKOV, T.F.

State of trees planted in clusters in Gorki Leninskiye.
Agrobiologiia no.5:783-784 S-O'63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki sel'skogo khozyaystva.

ZASYADNIKOV, T.F. (Moskva)

Accretion of trees in single-species plantations. Agrobiologiia no.5:795-796 S-O '62. (MIRA 15:11)
(Gagra--Trees)

S/185/62/007/010/015/020
D234/D308

AUTHORS: Dubovyts'ka, N. V., Zasymchuk, O. E., Larikov, L. N. and Petrov, Yu. M.

TITLE: X ray methods for the investigation of the kinetics of growth of recrystallization centers

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 10, 1962, 1134-1136

TEXT: To determine more accurately the dimensions of recrystallization centers corresponding to the appearance of 'punches', thin (0.05 mm) carbonyl Ni foils (99.99% Ni) were studied by electron microscopy, after which x ray photographs at Cu K_α wavelength were taken. Appearance of centers with maximum dimension $L = 2 \times 10^{-4}$ cm after annealing during 15 min at 520°C corresponds to the appearance of first 'punches' on x ray photographs. Centers with $L = 7 \times 10^{-4}$ cm correspond to very large quantities of spots and even to disappearance of the continuous line background. There is 1 figure.

Card 1/2

X ray methods for ...

S/185/62/007/010/015/020
D234/D308

ASSOCIATION: Instytut metalofizyky AN URSR, m. Kyyiv (Institute of Metal Physics, AS UkrSSR, Kiev)

SUBMITTED: July 4, 1962

Card 2/2

S/185/62/007/002/011/016
D299/D302

AUTHORS: Zasymchuk, O.E., and Larikov, L.N.

TITLE: Linear growth rate of recrystallization sites in niobium

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 2, 1962, 202 - 204

TEXT: The temperature dependence was studied of the linear growth rate of recrystallization in niobium (99.997 % pure), deformed by 94 %) by uniaxial compression at room temperature. The specimens were heated in evacuated quartz containers; the temperature varied between 960 and 1080°C. The recrystallization rate was measured by the time τ, after which the first visible recrystallization sites (of size L) appeared. In the references it was shown that τ is mainly determined (in very deformed metals), by the linear growth rate, G. X-ray pictures of the specimens were taken. A figure shows the microstructure of niobium, tempered for 1 hour at a temperature of 1005°C. Another figure shows the graph lgG versus 1/T. The depen-

Card 1/2

dence is practically linear and can be described by the equation:

$$G = G_o \exp(-Q_G/RT) = 10^{16} \exp\left(-\frac{130000 \pm 10000}{RT}\right) \text{cm/sec.}$$

The large values of G_o and Q_G are noted; they are apparently due to the presence of impurities. A similar effect was observed by other investigators in aluminum and also in nickel. The obtained results were compared with the results of L.I. Lysak, and L.V. Tyknonov (Ref. 5: Pytannya fizyky metaliv ta metaloznavstva, Vyd-vo AS UkrRSR, Kyyiv, 1958, p. 20), concerning tempering of niobium. Of significance is a considerable decrease in the hardness of very deformed (at room temperature) niobium, aged at 650 - 950°C before recrystallization. There are 2 figures and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: W. Anderson, R.F. Mehl, Trans. AIME, 161 140, 1945; T.E. Tietz, R.A. Anderson, J.E. Dorn, Trans. AIME, 185, 921, 1949.

ASSOCIATION: Instytut metalofizyky AN URSR (Institute of Physics of Metals of the AS UkrRSR), Kyyiv

SUBMITTED: March 17, 1961

KOCHUROV, A.S.; NAZAROV, A.G.; ZASYPKIN, A.G.; GIMMEL'MAN, N.R. [deceased]; VOLEGOV, A.F.; NESTEROV, A.A.; FILIPPOV, A.S., kand. tekhn. nauk, retsenzent; RYAZANOV, K.I., inzh., retsenzent; ZAKHAROV, B.P., inzh., nauchn. red.; YERMAKOV, N.P., tekhn. red.

[Handbook for mold makers] Spravochnik rabochego-model'shchika. Izd.2., perer. i dop. Moskva, Mashgiz, 1963. 360 p. (MIRA 17:2)

KOCHUROV, Aleksey Stepanovich; NAZAROV, Aleksey Gavrilovich; ZASYPKIN, Aleksey Georgiyevich; GIMMEL'MAN, Nikolay Robertovich; VOLEGOV, Andrey Fedorovich; NESTEROV, Boris Arkad'yevich; TROYANOV, Andrey Konstantinovich; FILIPPOV, A.S., kand.tekhn.nauk, retsenzent; RYAZANOV, K.I., inzh., retsenzent; ZAKHAROV, B.P., inzh., red.; YERMAKOV, M.P., tekhn.red.

[Manual for modelmakers] Spravochnik rabochego-model'shchika. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 379 p. (MIRA 13:3)

(Models and modelmaking)

KHLEBNIKOV, Stanislav Dmitriyevich, starshiy prepodavatel'; ZASYPKIN, Aleksandr Sergeyevich, aspirant

Modeling of single-phase bridge rectifiers with ideal valves using analog computers. Izv. vys. ucheb. zav.; elektromekh. 7 no.4[illegible]455 '64 (MIRA 17:7)

1. Kafedra teoreticheskoy i obshchey elektrotekhniki Novocherkasskogo politekhnicheskogo instituta (for Khlebnikov) 2. Kafedra elektricheskikh stantsiy, setey i s.! tem Novocherkasskogo politekhnicheskogo instituta (for Zasypkin).

DROZDOV, A.D.; ZASYPKIN, A.S.

Protection of a.c. locomotives from short-circuits. Sbor. nauch. trud. ElNII 3:132-141 '63. (MIRA 17:4)

ZASYPKIN, Aleksandr Sergeyevich, aspirant

Highly sensitive short-circuit protection system of a step-down transformer with wide voltage regulating range under load. Izv. vys. ucheb. zav.; elektromekh. 6 no.11:1265-1270 '63. (MIRA 17:4)

1. Kafedra elektricheskikh stantsiy, setey i sistem Novocherkasskogo politekhnicheskogo instituta.

ZASYPKIN, Aleksandr Sergeyevich, aspirant

Relay-type differential protection of an a.c. locomotive. Izv.vys. ucheb.zav.; elektromekh. 5 no.10:1168-1174 '62. (MIRA 15:11)

1. Novocherkasskiy politekhnicheskiy institut.
(Electric locomotives) (Electric protection)

ZASYPKIN, D.P.

New technological processes for manufacturing nipples.
Mashinostroenie no.1:79 Ja-F '64. (MIRA 17:7)

ZASYPKIN, I.G., inzh.

Standardization of power resources in industrial enterprises of the Karaganda Province. Prom.energ. 19 no. 2:7-9 F '64. (MIRA 17:5)

ZASYPKIN, I.G.; SOTNIKOV, M.A.

For the saving of electric power. Prom. energ. 16 no.4:9-11 Ap '61. (MIRA 14:9)

(Karaganda Province—Electric power)

ALEKSEYEV, Ye.S.; ZASYPKIN, N.S.; SHTOKAREV, A.D.; BUROVOI, I.A.; KRICHEVSKIY, G.Ya.; BOROVKOV, Ye.G.; KUZNETSOV, Yu.A.

Utilization of the excess heat of the fluidized bed of roasting furnaces. Prom. energ. 20 no.5:43-47 My '65. (MIRA 18:7)

38183. ZASYPKIN, P. A.

Kormovyye dostoinstva tysyachelistnika. (Referat). Sov. Zootekhniya, 1949, No 8, s. 106-07

ZASYPKIN, S.

Increase the number of young pigs 2,3 times! Nauka i pered. op. v sel'khoz. 9 no.4:29-30 Ap '59. (MIRA 12:6)

1.Glavnyy zootekhnik sovkhoza "Opyt," Podgorenskogo rayona, Voronezhskoy oblasti.

(Swine)

ACCESSION NR: AT4037672 S/2981/64/000/003/0330/0338

AUTHOR: Semenov, A. Ye.; Zasy*pkin, V. A.; Gabidullin, R. M.

TITLE: New procedures for refining aluminum alloys

SOURCE: Alyuminiyevy*ye splavy*, no. 3, 1964. Deformiruyemy*ye splavy* (Malleable alloys), 330-338

TOPIC TAGS: aluminum alloy, alloy AV, alloy D1, alloy D16, alloy AMg6, alloy AK8, magnalium, duralumin alloy, aluminum alloy refining, bulk vacuum refining, continuous chlorination refining, continuous filtration refining, granulated magnesite refining, carnallite flux, cryolite flux, melt gas saturation, chlorination bath, filtration tank

ABSTRACT: Laboratory and field experiments were carried out with alloys D16 and AK8 to compare the effectiveness of flux and vacuum refining of these alloys in the furnace to mixer stages of the casting process. Other tests concerned continuous chlorination refining and granulated magnesite filtration in the mixer to mold stages. Vacuuming (720±5C, five minutes, 0.2-0.5 mm Hg, height of metal column in crucible 100±5 mm) was effective in removing solid non-metallic impurities, its effectiveness improving with higher initial gas saturation levels (0.32% impurities at 0.15 to 0.0% at 0.35 cc/100 g). Factory tests with vacuuming

Card 1/2

ACCESSION NR: AT4037672

(ladle capacity 2 tons, height of metal column 1000-1100 mm, 730-680C, 15 min., residual pressure ≈ 1 mm Hg) and the use of flux (20-23% cryolite, melt temp. 700-730C, 2-3 kg flux per ton of melt) confirmed that the former is more effective (0.04% impurities as compared to 0.30%); hence, continuous vacuum refining in the ladle or placement of a vacuum chamber between furnace and mixer are recommended. Gaseous chlorination (AMg6) in the mixer proved unsuitable. However, chlorination in a special bath placed between mixer and mold (see Fig. 1 in the Enclosure) reduced the content of impurities to 0.200 mm^2/cm^2 (compared to 0.284 without chlorination; both samples preliminarily refined in the mixer with carnallite flux). Filtration through an intermediate tank (see Fig. 2 in the Enclosure) containing granulated magnesite (diameter 6-10 mm; filtering compartment volume 1500 cc or greater) in liquid cryolite flux produced the best results for duralumin alloys; with liquid carnallite flux this method was best for AMg6, and is also recommended for magnalium alloys. "I. L. Teytel', S. N. Anan'in, N. M. Babary*kin, A. M. Shumskiy, V. I. Kulakov, G. A. Kopy*tov, M. A. Kryukov, I. Ya. Zal'tsman, N. D. Vinokurov, M. L. Vasilevskaya, G. S. Makarov, A. M. Landa, P. Ye. Khodakov, and V. V. Solov'yeva took part in various aspects of the work." Orig. art. has: 4 tables and 2 diagrams.

ASSOCIATION: none

Card 2/3 2

KHABAROVA, O.Ye.; ZASYPKIN, V.A.; SEMENOV, A.Ye.; PODSECHINOV, A.V. [deceased]

Characteristics of smelting and casting of the 7AD23 alloy. Alium. splavy no.3:201-208 '64. (MIRA 17:6)

8 (6) SOV/91-59-4-5/28

AUTHORS: Zasypkin, V. A. and Bukhman, G. D., Engineer

TITLE: An Additional Steam Extraction on a AK-34 Turbine (Osushchestvleniye dopolnitel'nogo otbora para na turbine AK-34)

PERIODICAL: Energetik, 1959, Nr 4, pp 7 - 8 (USSR)

ABSTRACT: The authors describe the additional steam extraction for regeneration purposes on a 34-megawatt impulse reaction Siemens Schuckert turbine, having one Rateau stage and 26 reaction stages in the high-pressure section. The steam reentry from the high-pressure section into the low-pressure section is performed by two 1000 mm pipes. The turbine had an uncontrolled steam extraction after the 23rd high-pressure reaction stage at 2.1 atmospheres for heating the condensate to 100-105°C which entered the deaerators. An additional steam extraction at 16.8 atm was installed in 1954. In 1958, the authors suggested a new steam extraction after the 26th stage of the high-pressure section at 0.55 atm and 83°C for

Card 1/2

An Additional Steam Extraction on a AK-34 Turbine

a new PN-130-3 condensate heater produced by the plant "Komega". This leads to an increased steam consumption of the 24th, 25th and 26th reaction stages which in turn increased the pressure on them. Calculations performed by the Khar'kovskoye otedeleniye Tsentral'nogo konstruktorskogo byuro (Khar'kov Branch of the Central Designing Office) showed that the pressure increase did not exceed the nominal stress in the base sections of the blades of these stages. The condensate is heated by the new method from 35°C to 73°C whereby 1800 tons of fuel are saved annually. There is 1 diagram.

ANDREYEV, A.D.; ZASYPKIN, V.A.; ISTRIN, M.A.

Conference on efficient furnace designs for melting aluminum alloys. (MIRA 18:5)
TSvet. met. 38 no.4:73-80 Ap '65.

SEMENOV, A.Ye.; ZASYPKIN, V.A.; GABIDULLIN, R.M.

New methods of refining aluminum alloys. Alium. splavy no.3: 330-338 '64. (MIRA 17:6)

SEMENOV, A.Ye.; ZASYPKIN, V.A.; GABIDULLIN, R.M.

New methods of refining aluminum alloys. Alium. splavy no.3: 330-338 '64. (MIRA 17:6)

ZASYPKIN, V.A.; BUKHMAN, G.D., inzh.

Carrying out additional bleeding on the AK-34 turbine. Energetik 7 no.4:7-8 Ap '59. (MIRA 12:5)
(Steam turbines)

L 9486-66

ACCESSION NR: AT4037672 S/2981/64/000/003/0331/0338

AUTHOR: Smagov, A. Ye.; Zeyfman, V. A.; Gabidullin, R. M.

TITLE: New procedures for refining aluminum alloys

SOURCE: Alyuminiyevyye splavy*, no. 3, 1964. Deformiruyemyye splavy* (Malleable alloys), 330-338

TOPIC TAGS: aluminum alloy, alloy AV, alloy D1, alloy D16, alloy AK6, alloy AK8, magnalium, duralumin alloy, aluminum alloy refining, bulk vacuum refining, continuous chlorination refining, continuous filtration refining, granulated magnesite refining, carnallite flux, cryolite flux, melt gas saturation, chlorination bath, filtration tank

ABSTRACT: Laboratory and field experiments were carried out with alloys D16 and AK8 to compare the effectiveness of flux and vacuum refining of these alloys in the furnace to mixer stages of the casting process. Other tests concerned continuous chlorination refining and granulated magnesite filtration in the mixer to mold stages. Vacuuming (720±5C, five minutes, 0.2-0.5 mm Hg, height of metal column in crucible 100±5 mm) was effective in removing solid non-metallic impurities, its effectiveness improving with high.. initial gas saturet on levels (0.32% impurities at 0.15 to 0.0% at 0.35 cc/100 g). Factory tes:s with vacuuming

Card 1/5

L 9486-66

ACCESSION NR: AT4037672

15

(ladle capacity 2 tons, height of metal column 1000-1100 mm, 730-780C, 15 min., residual pressure ~ 1 mm Hg) and the use of flux (20-23% cryolite, melt temp. 700-730C, 2-3 kg flux per ton of melt) confirmed that the former is more effective (0.04% impurities as compared to 0.30%); hence, continuous vacuum refining in the ladle or placement of a vacuum chamber between furnace and mixer are recommended. Gaseous chlorination (AMg6) in the mixer proved unsuitable. However, chlorination in a special bath placed between mixer and mold (see Fig. 1 in the Enclosure) reduced the content of impurities to 0.200 mm^2/cm^2 (compared to 0.284 without chlorination; both samples preliminarily refined in the mixer with carnallite flux). Filtration through an intermediate tank (see Fig. 2 in the Enclosure) containing granulated magnesite (diameter 6-10 mm; filtering compartment volume 1500 cc or greater) in liquid cryolite flux produced the best results for duralumin alloys; with liquid carnallite flux this method was best for AMg6, and is also recommended for magnalium alloys. "I. L. Teytel', S. M. Anan'in, N. M. Babarykkin, A. M. Shumskiy, V. I. Kulakov, G. A. Kopytov, M. A. Kiyukov, I. Ya. Zal'tsman, N. O. Vinokurov, M. L. Vasilevskaya, G. S. Makarov, A. I. Landa, P. Ye. Khodakov and V. V. Solov'yeva took part in various aspects of the work. [illegible] tables, 4 graphs and 2 diagrams.

ASSOCIATION: none

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L 9486-66

ACCESSION NR: AT4037672

SUBMITTED: 00 DATE ACQ: 04Jun64 ENCL: 02

SUB CODE: NM NO REF SOV: 003 OTHER: 000

Card 3/5

L 9486-66

ACCESSION NR: AT4037672

O

ENCLOSURE: 01

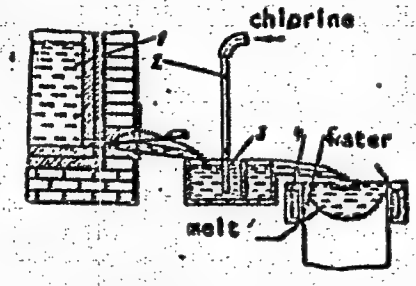

Figure 1. Continuous chlorination of melt during ingot casting:
1 - mixer; 2 - quartz tube; 3 - chlorination tank;
4 - mold; 5 - ingot.

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L 9486-66

ACCESSION NR: AT4037672

ENCLOSURE: 02

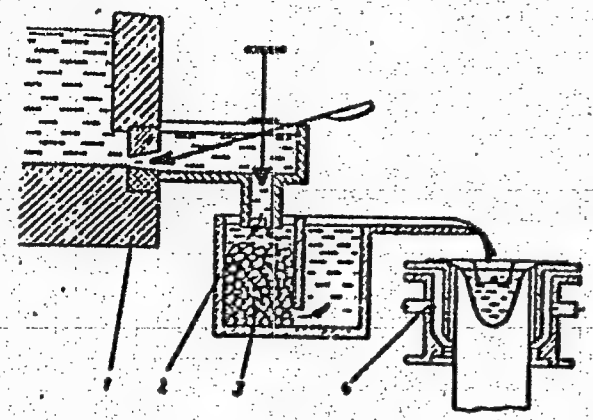

Fig. 2. Continuous filtration of melt during ingot casting: 1 - mixer; 2 - filtration tank; 3 - filter; 4 - mold.

Card 5/5 nda

L 46988-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JT

ACC NR: AT6024909 (A,N) SOURCE CODE: UR/2981/66/000/004/0021/0025

AUTHOR: Zal'tsman, I. Ya.; Grushko, O. Ye.; Semenov, A. Ye.; Zamkin, V. A.; Vinokurov, N. D.; Kryukov, M. A.; Tevstyugin, A. P.; Bozhenok, I. V.

38
B+1

ORG: none

TITLE: Some aspects of the preparation of VAD23 alloy 16

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 21-25

TOPIC TAGS: aluminum alloy, copper containing alloy, lithium containing alloy, manganese containing alloy, cadmium containing alloy / VAD23 alloy

ABSTRACT: VAD23 alloy belongs to alloys of the Al-Cu-Li system with small admixtures of Mn and Cd. Because of the loss of lithium from the melt during the preparation of this alloy, the introduction of lithium (and cadmium) was carried out under a special flux consisting of a eutectic mixture of lithium and potassium chlorides. This flux was found to prevent the loss of lithium to a considerable extent; however, as the lithium content of the alloy increases, this protection becomes less effective. Particular attention must be paid to the quality of preparation of the flux and to the manner in which lithium is introduced into the melt (without disturbing the flux). The flux has the disadvantage of being hygroscopic because of the LiCl present in its composition, and therefore must be used only in the liquid or freshly-remelted state, the

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L 46988-66

ACC NR: AT6024909

liquid state being preferred. Refining of the alloy with gaseous chlorine after the addition of lithium insures the required purity of the ingots. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001

Card 2/2

L 46987-66 EWP(k)/EWT(m)/EWP(t)/ETI IJP(c) JH/JD

ACC NR: AT6024910 (A,N) SOURCE CODE: UR/2581/66/000/004/0026/0031

AUTHOR: Grushko, O. Ye.; Zal'tsman, I. Ya.; Vinokurov, N. D.; Sezenov, A. Ye.; Zasypkin, V. A.; Kryukov, M. A.; Yevstyugin, A. P.; Bozhenok, N. V.

40
B+1

ORG: none

TITLE: Process of casting VAD23-alloy ingots

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 26-31

TOPIC TAGS: metal casting, lithium containing alloy, aluminum alloy, copper containing alloy, VAD23 aluminum alloy

ABSTRACT: In elaborating a process for casting ingots from VAD23 alloy by the continuous method, the authors studied the casting properties (tendency to form hot and cold cracks) of this alloy, established the temperature conditions of the casting, and determined the methods of protecting the metal during transit from the mixer to the crystallizer and in the crystallizer. The chemical activity of lithium, which enters into the composition of the alloy, made it necessary to protect the alloy surface during transit. Two methods were tested for this purpose, involving the use of (1) sulfur dioxide and (2) a flux consisting of a eutectic mixture of lithium and potassium chlorides. Only the latter method gave satisfactory results. A temperature of 700-730°C was found to be optimal for casting. The quality of the ingots obtained was thoroughly

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L 46987-66

ACC NR: AT6024910

checked by analyzing the structure of fractures, microstructure, density, liquation, and mechanical properties along the length and cross section of the ingot in the longitudinal and trasverse directions. The elaborated casting process, which includes protection of the metal with a liquid flux on the path from the mixer to the crystallizer, produced good-quality ingots. Orig. art. has: 3 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002

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L 46972-66 EWT(m)/T/EWP(t)/ETI IJP(c) JH/WW/JD/JG

ACC NR: AT6024943 (A,N) SOURCE CODE: UR/2981/66/000/004/0291/0295

AUTHOR: Zasypkin, V. A.; Semenov, A. Ye.

ORG: none

TITLE: Behavior of dissolved gases during crystallization of aluminum alloys

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 291-295

TOPIC TAGS: aluminum alloy property, hydrogen, metal crystallization

ABSTRACT: A comparative study of the gas saturation of AMg6, V93, V95, and other alloys in ingot or liquid form showed that hydrogen is almost completely retained in the metal during crystallization, even though no macroporosity was observed in the structure of the ingots. Apparently, all of the hydrogen is present in a supersaturated solution. The amount of retained gas depends mainly on the crstallization rate, nature of the alloy, initial gas saturation and other factors. It was found that in AMg6, AK6, V93, V95, AL19, D16 and other alloys, as the gas content increases within a certain range, the thickness of the grain boundaries changes as a result of the evolution of hydrogen, and interlayers and discontinuities of various sizes are formed. In a certain range of gas concentration, as the latter increases, the grain size diminishes. On the basis of the study, the distribution of the gas during crystallization of aluminum alloys was determined as a function of the initial gas saturation of

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L 46972-66

ACC NR: AT6024943

the liquid metal, and is shown in Fig. 1.

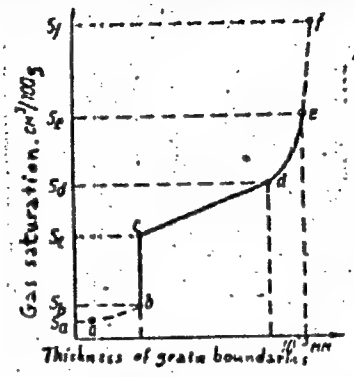

Fig. 1. Distribution of gas during crystallization of aluminum alloys

In the latter, portion a-b indicates interlayers of second phases and of the gas dissolved therein; portion b-c shows the stage of dissolution of hydrogen in the solid solution and the formation of intrablock porosity; portion c-d is linear and characterized by the liberation of gas along grain boundaries with formation of micropores and discontinuities; d-e denotes grain refining due to the isolation of the growing crystals from the liquid phase by the liberated hydrogen; e-f characterizes the appearance of cellular porosity and macroporosity, and point f corresponds to the maximum quantity of hydrogen capable of dissolving in the melt at the crystallization temperature. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 002

Card 2/2

BELKIN, N.V.; ZASYPKIN, V.I.

Postal service and computer technology aid industrial management. Vest. sviazi 23 no.3:7-8 Mr '63. (MIRA 16:3)

1. Nachal'nik vychislitel'nogo tsentra TSentral'nogo proyektno-konstruktorskogo i tekhnologicheskogo byuro Moskovskogo oblastnogo soveta narodnogo khozyaystva (for Belkin). 2. Glavnyy inzh. Moskovskogo oblastnogo upravleniya svyazi (for Zasypkin).
(Postal service) (Industrial management) (Electronic computers)

ZASYPKIN, V.I.

Automation of telephone communication in the Moshaisk district in the Moscow Province. Vest. sviazi 24 no.6:25-27 Je '64. (MIRA 17:11)

1. Glavnyy inzh. Moskovskogo oblastnogo upravleniya svyazi.

GRIGOR'YEVA-BERENSHTEYN, A. G., kand. med. nauk; KARAPETIAN, A. Ye., podpolkovnik meditsinskoy sluzhby, kand. med. nauk; SHCHERBAKOV, I. F., podpolkovnik meditsinskoy sluzhby; CHIRKOVA, O. O.; ZASYPKIN, V. Ya., starshiy leytenant meditsinskoy sluzhby

Effectiveness of immunization with live vaccine against parotitis in the focus of infection. Voen.-med. zhur. no.12:63 D '61. (MIRA 15:7)

(MUMPS--PREVENTIVE INOCULATION)

ZASYPKIN, V. YA., (First Lieutenant of the Medical Service); GRIGOR'YEVA-BERENSHTEYN, A. G., (Candidate of Medical Sciences, Lieutenant Colonel of the Medical Service); KARAPETYAN, A. YE., (Candidate of Medical Sciences); SHCHERBAKOV, I. F., (Lieutenant Colonel of the Medical Service); CHIRKOVA, O. O.

"The Effectiveness of Immunization with Live Mumps Vaccine in a Focus of Infection"

Voyenno-Meditsinskiy Zhurnal, No. 12, December 1961, pp 62-73

MALAKHOV, A.A., prof.; PIL'SHCHIKOV, B.I., inzh.; ZASYPKIN, V.Ye., starshiy prepodavatel'

Study of regional fracturing of Ural rocks. Izv. vys. ucheb. zav.; gor. zhur. no.11:10-14 '61. (MIRA 15:1)

1. Sverdlovskiy gornyy institut imeni V.V.Vakhrusheva. Rekomendovana kafedroy boshchey geologii.
(Ural Mountains--Joints (Geology))

SOV/139-58-5-11/35

AUTHORS: Presnov, V. A. and Zasypkina, A. R.

TITLE: Investigation of the Contact Between a Semiconductor and a Metal with an Intermediate Insulating Layer (Issledovaniye kontakta poluprovodnika s metallom s promezhutochnym sloyem izolyatora)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, fizika, 1958, Nr 5, pp 55-59 (USSR)

ABSTRACT: This paper was presented at the Conference of Higher Educational Establishments on Dielectrics and Semiconductors, Tomsk, February, 1958. Rectification of an alternating current is possible at a contact of a semiconductor with a metal, the two being separated by a thin layer of a dielectric (Refs.1-4). The authors investigated systems consisting of a germanium semiconductor (5-7 Ω.cm resistance, dimensions 5 x 5 x 2 mm), a lacquer layer and a metal plate (silver, magnesium or lead). The germanium surface was polished and etched in hydrogen peroxide. One side of the germanium plate was painted with a layer of polystyrene, linoxyn (oxidised linseed oil) or vinyflex lacquer. The other side of the germanium plate had a layer of tin deposited on it to produce an ohmic contact. Measurements of the distribution of potential in such systems showed that the potential falls mainly (90% and

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Investigation of the Contact Between a Semiconductor and a Metal with an Intermediate Insulating Layer

more in the blocking direction) at the rectifying contact. Volt-ampere characteristics were obtained for the samples studied. The rectification coefficients were of the order of 100 to over 10 000 at 1 V applied voltage. The lacquer layer thickness, found by weighing, was of the order of 0.001cm. Rectification in many samples was still quite high at voltages of 10-30 V. The dynamic characteristics show a loop in the blocking direction (Fig.2). The static characteristic of a sample covered by linoxyn lacquer and with a lead electrode, is shown in Fig.3. The forward (conducting) direction corresponds to the positive potential on the metal. The effects observed do not depend greatly on the work function of the materials in contact. The dynamic and static characteristics of the same sample with electrodes of silver and magnesium differ somewhat in the forward direction (Fig.4). The lacquer films were found to have defects (pin-holes). Schottky (Ref. 17) indicated that such defects may play an important role in

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rectification at insulating barrier layers, but this is disputed by other authors (Refs.3-8). The present authors found that the samples with defects in the lacquer film possess considerable rectification coefficients (over 1000) if the electrodes are of the pressure type. Deposition of electrodes by evaporation in vacuo lowers the rectification coefficients very considerably. These coefficients are also lowered if the press-on electrodes are placed on such parts of the lacquer film which are free of defects. Very high rectification coefficients (of the order of several thousand) were also obtained in systems with an insulating KCl and S layers deposited in vacuo on germanium plates. Mercury electrodes were used in this case and the optimum thickness of the dielectric was found to be 10^{-4} cm. As in the case of the lacquer films, vacuum deposition of electrodes produced a lowering of the rectification coefficient. Rectification via an insulating layer was dealt with theoretically by Pokar and Mott in 1939. Their work was extended by Gilinskiy and Cheglokov (Ref.5), who allowed for the fall of potential across the semiconductor. Conduction through a very thin dielectric is possible by means of the tunnel effect. Thermal injection of electrons into the

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conduction band of the dielectric is possible at larger dielectric thicknesses. The high field strength in the dielectric may also contribute (Ref.6) to the rectification mechanism. The present authors add that the formation of a p-n junction in the semiconductor is also possible. The energy bands in the semiconductor next to the dielectric may be so deformed as to produce a p-layer in an n-type semiconductor. There are 4 figures and 8 references, 4 of which are Soviet, 2 German, 1 Dutch and 1 Soviet translated from English.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuybysheva (Siberian Physico-Technical Institute at Tomsk State University imeni V. V. Kuybyshev)

SUBMITTED: March 20, 1958.

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SOV/139-59-3-7/29

AUTHORS: Presnov, V.A., and Zasypkina, A.R.

TITLE: On the Mechanism of Rectification of an Alternating Current at the Contact of a Semiconductor with a Metal with an Artificial Barrier Layer [Between Them]

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 3, pp 41-44 (USSR)

ABSTRACT: More than twenty years have passed since the classical experiments of V.P. Zhuze (Ref 1) on rectification at a semiconductor-metal contact with an artificial dielectric barrier layer between the semiconductor and the metal, but there is still no agreement on the mechanism of this rectification. The present authors suggested (Ref 9) that the effect may be explained by formation of a region with low current-carrier density in the semiconductor next to the dielectric barrier layer. The applied external voltage would then distribute itself between the dielectric layer and the low-carrier-density region in the semiconductor. This system is known to possess rectifying properties. Unfortunately, Ye.I. Cheglokov and L.N. Khlebnikova (Ref 10) showed theoretically that formation of such a low-carrier-density region is unlikely.

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Cheglokov and Khlebnikova showed also that if an increase of the electrical conductivity of the barrier layer in strong fields is allowed for, rectification could be expected even if no low-carrier-density region was formed in the semiconductor. For one direction of the applied external voltage v the contact potential v_k will act in the same direction as v, i.e. the total field will be $E = (v + v_k)/L$, where L is the thickness of the dielectric barrier layer. For the opposite direction of the applied external voltage the contact potential v_k will act in the direction opposite to that of v, i.e. the total field will be $E = (v - v_k)/L$. In the first case the value of E may exceed the critical electric field E_k in the dielectric layer, above which Ohm's law is no longer obeyed. This will produce a rise of the electrical conductivity (the forward direction). In the second case the electrical conductivity will not rise, and this direction can be considered as the inverse direction. Defining the rectification factor K by

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$K = I_{forward}/I_{inverse}$, when $v_{forward} = v_{inverse}$, the following law was obtained by Cheglokov and Khlebnikova:

$$K = e^{v_k\left(\frac{2\alpha}{eL} - \frac{1}{kT}\right)} \qquad (1)$$

where v_k is the contact potential at the metal-semiconductor boundary, α is the exponent in Poole's law ($\sigma = \sigma_0 \exp(\alpha E)$, where σ is the electrical conductivity L is the thickness of the barrier layer, e is the electron charge, k is the Boltzmann constant, T is the absolute temperature. Rectification in such a system can be expected in a limited range of external voltages, since when $v \gg v_k$ the contact potential can be neglected and no rectification can occur. Experimental verification of the above theoretical results meets with several difficulties: (1) secondary effects, and (2) choice of a suitable dielectric and a suitable method of deposition of a continuous dielectric film on a semiconductor surface.

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When mica was placed between a metal and a semiconductor, asymmetry of the volt-ampere characteristics was observed. If the effect of high-voltage polarization in mica was allowed for, the volt-ampere characteristics became practically linear (cf Fig 1 which shows a volt-ampere characteristic for a system consisting of platinum, 10^{-4} cm thick mica and n-type germanium). Similar behaviour was observed for a platinum-glass-n-Ge system. Here again, when high-voltage polarization was excluded, the volt-ampere characteristic was practically linear (Fig 2). When a layer of lacquer was placed between a metal (e.g. Pb) and n- or p-type germanium, clear rectification was observed (Fig 3). Such rectification was obtained with such lacquers as shellac, polystyrene and linseed-oil, etc., and also with layers of KCl, NaCl and S, deposited by vacuum evaporation. Rectification factors of 10^4 - 10^5 were obtained using n-type germanium monocrystals. When p-type germanium was used, rectification factors were much smaller. Electrolytic studies

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showed that the lacquer films used by the authors always had a number of micropores. This means that rectification occurred at point contacts. Confirmation of this conclusion was obtained by studies using p-type germanium and metals (Mg, Ag, Sn, Pb) which gave different potentials for contact with germanium. There are 3 figures and 10 references, of which 5 are Soviet, 2 English, 2 German and 1 Dutch.

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SUBMITTED: August 28, 1958

ZASYPKINA, A. N. (SFTI)

"The good rectifier properties of the silver-polystyrene varnish-germanium- and the mercury-KCl-germanium system"

Report presented at a Conference on Solid Dielectrics and Semiconductors, Tomsk Polytechnical Inst., 3-8 Feb. 58.
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APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963920002-9"

ACCESSION NR: AR4015693 S/0081/63/000/023/0355/0355

SOURCE: RZh. Khimiya, Abs. 23K85

AUTHOR: Zasy*pkina, V. S.; Kiyuchnikov, N. G.

TITLE: Formation of a protective film on steel in the presence of dicyclohexylamine nitrite

CITED SOURCE: Uch. zap. Mosk. gos. ped. in-t im. V. I. Lenina, no. 181, 1962, 42-48

TOPIC TAGS: corrosion, corrosion inhibitor, steel corrosion, protective film, dicyclohexylamine nitrite

ABSTRACT: The effect of vapors of dicyclohexylamine nitrite on the process of formation of a protective film on steel-10 and 45 was studied by an optical method. It was found that the vapors decreased the thickness of the natural loose oxide film and transformed it to a more stable state. An electronographic study of the steel surface in an atmosphere of dicyclohexylamine nitrite vapors showed that a magnetic oxide of iron, Fe_3O_4 or γ-Fe_2O_3, is formed on the steel surface. The vapor phase of the inhibitor protects the steel only when the natural oxide film is present on its surface. In its absence and also in the absence of oxygen

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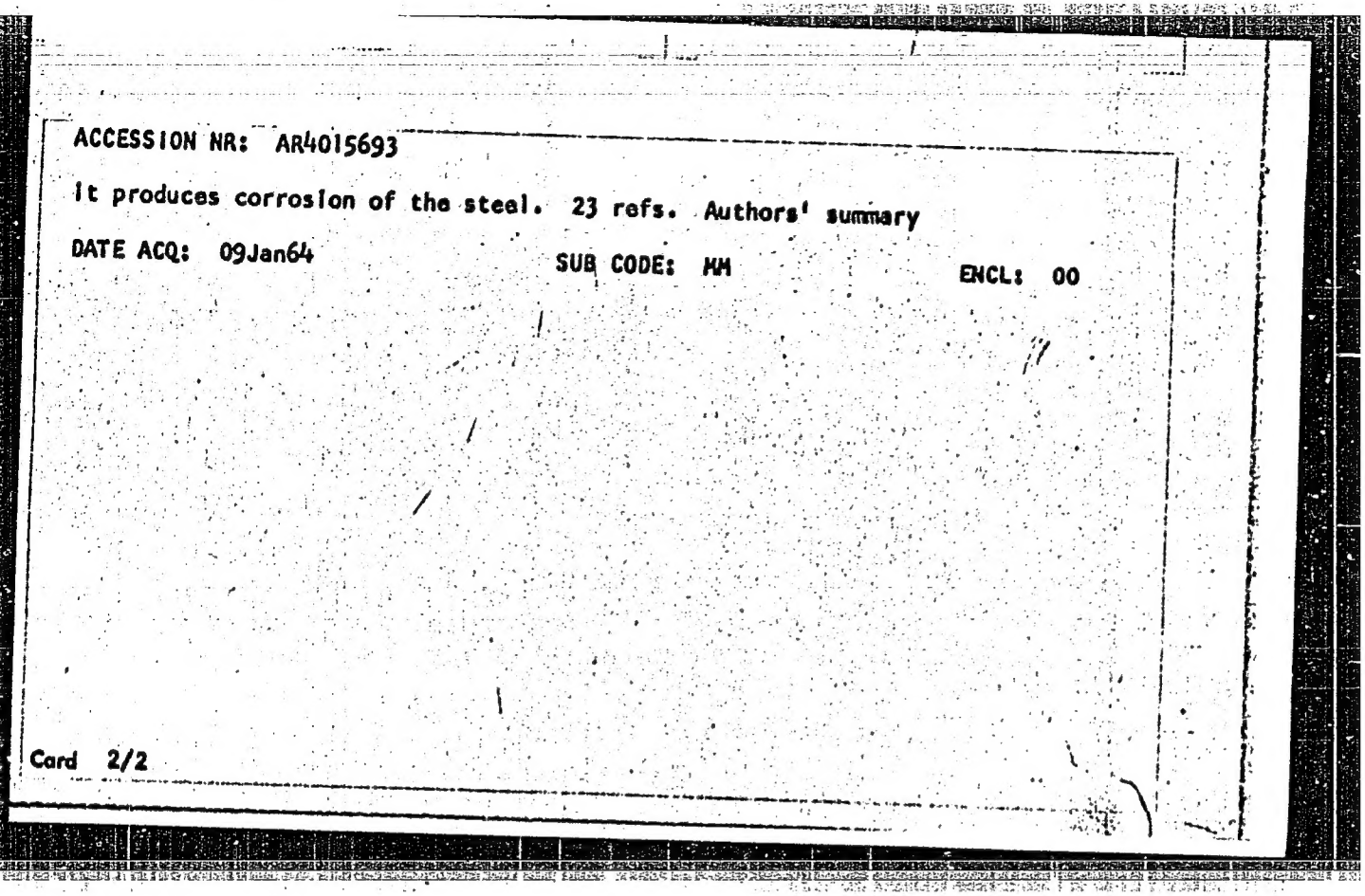

ACCESSION NR: AR4015693

It produces corrosion of the steel. 23 refs. Authors' summary

DATE ACQ: 09Jan64 SUB CODE: MM ENCL: 00

Card 2/2

ALEKSANDROVA, T.S.; KIRYUNINA, Ye.I.; ZASYPKINA, Z.V.; GURKINA, A.N.

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ACCESSION NR: AR4015688 S/0081/63/000/023/0354/0354

SOURCE: RZh. Khimiya, Abs. 23K78

AUTHOR: Zasy*pkina, V. S.; Klyuchnikov. N. G.

TITLE: Electrochemical studies on the interaction of certain inhibitors with iron, cobalt, nickel and copper

CITED SOURCE: Uch. zap. Mos. gos. ped. in-t im. V. I. Lenina, no. 181, 1962, 108-115

TOPIC TAGS: electrochemistry, iron electrode, cobalt electrode, nickel electrode, copper electrode, cyclohexylamine, sodium nitrite, ethanolamine, corrosion, corrosion inhibitor

TRANSLATION: Electrochemical measurements show that the inhibitors being investigated (dicyclohexylamine nitrate, cyclohexylamine, $NaNO_2$, monoethanolamine, monoethanolamine, benzoate) have a special effect on the anodic process, retarding its speed. Measurements of the electrode potential on steel-20 in a stream of hydrogen and in the absence of an oxide film on the metal surface show that these inhibitors stimulate the process of formation

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